



\*\*FILE\*\*ID\*\*FORWRITDF

FFFFFFFFF	000000	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TTTTTTTTTT	DDDDDDDD	FFFFFFFFF	
FFFFFFFFF	000000	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TTTTTTTTTT	DDDDDDDD	FFFFFFFFF	
FF	00	00	RR	RR	RR	IIIIII	TT	DD	FF	
FF	00	00	RR	RR	RR	IIIIII	TT	DD	FF	
FF	00	00	RR	RR	RR	IIIIII	TT	DD	FF	
FF	00	00	RR	RR	RR	IIIIII	TT	DD	FF	
FFFFFFFFF	00	00	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TT	DD	FFFFFFFFF
FFFFFFFFF	00	00	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TT	DD	FFFFFFFFF
FF	00	00	RR	RR	WW	WW	RR	DD	FF	
FF	00	00	RR	RR	WW	WW	RR	DD	FF	
FF	00	00	RR	RR	WWWW	WWWW	RR	DD	FF	
FF	00	00	RR	RR	WWWW	WWWW	RR	DD	FF	
FF	00	00	RR	RR	WWWW	WWWW	RR	DD	FF	
FF	000000	RR	RR	WW	WW	RR	IIIIII	TT	DDDDDDDD	FF
FF	000000	RR	RR	WW	WW	RR	IIIIII	TT	DDDDDDDD	FF

LL	IIIIII	SSSSSSSS
LL	IIIIII	SSSSSSSS
LL	II	SS
LLLLLLLLL	IIIIII	SSSSSSSS
LLLLLLLLL	IIIIII	SSSSSSSS

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(2)	56	HISTORY ; Detailed Current Edit History
(3)	87	DECLARATIONS
(4)	131	FOR\$WRITE_DF - WRITE DIRECT formatted

0000 1 .TITLE FOR\$WRITE\_DF - entry point for FORTRAN WRITE DIRECT FORMATTED  
0000 2 .IDENT /1-012/ File: FORWRITDF.MAR Edit: JAW1012  
0000 3 :\*\*\*\*\*  
0000 4 :  
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0000 24 :  
0000 25 :\*\*\*\*\*  
0000 26 :  
0000 27 :  
0000 28 :  
0000 29 :\*  
0000 30 :\* FACILITY: FORTRAN Support Library - user callab!  
0000 31 :  
0000 32 :  
0000 33 :  
0000 34 :  
0000 35 :  
0000 36 :  
0000 37 :  
0000 38 :  
0000 39 :  
0000 40 :  
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0000 54 :  
ABSTRACT:  
This module contains the entry point for the FORTRAN  
WRITE DIRECT FORMATTED I/O statement. It is simply  
a call to FOR\$IO\_BEG with bits in R0 which describe the  
parameter list. FOR\$IO\_BEG interprets the parameters.  
MAINTENANCE NOTE:  
The transfer vector (RTLVECTOR+ALLGBL) must have the following:  
.TRANSFER FOR\$WRITE\_DF  
.MASK FOR\$IO\_BEG  
BRW FOR\$WRITE\_DF+2  
This puts the correct mask in entry vector, that is FOR\$IO\_BEG entry mask.  
Furthermore this module must only use R0 and R1  
since any other register might not be in the entry mask for FOR\$IO\_BEG.  
ENVIRONMENT: User access mode; mixture of AST level or not  
AUTHOR: Richard B. Grove, CREATION DATE: 28-May-78  
MODIFIED BY:  
T. Hastings, 29-July-78

0000 56 .SBTTL HISTORY ; Detailed Current Edit History  
0000 57  
0000 58  
0000 59 : Edit History for Version 1  
0000 60 :  
0000 61 : 0-10 - Add comment about vectors. TNH 23-June-78  
0000 62 : 0-12 - Pass arg in R0, not ROR, add comments. TNH 29-July-78  
0000 63 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78  
0000 64 : 1-002 - Change statement type symbols to be LUB\$K... JBS 07-DEC-78  
0000 65 : 1-003 - Change statement type symbols to be ISB\$K... JBS 11-DEC-78  
0000 66 : 1-004 - Add  $\wedge$  to the PSETF directive. JBS 22-DEC-78  
0000 67 : 1-005 - Add FOR\$READ\_KF, FOR\$READ\_KO, FOR\$REWRITE\_SF, FOR\$REWRITE\_SO,  
FOR\$READ\_IF, FOR\$READ\_IO, FOR\$WRITE\_IF, FOR\$WRITE\_IO,  
FOR\$READ\_KU, FOR\$REWRITE\_SU,  
SBL 2-May-1979  
0000 70 :  
0000 71 : 1-006 - Remove all entry points that need object time formatting,  
putting them in FOR\$ENTRY\_OBJ so that we can arrange to  
load the format compiler only when it is needed.  
0000 72 :  
0000 73 :  
0000 74 : JBS 26-JUN-1979  
0000 75 : 1-007 - Remove entry point FOR\$ENCODE\_MF; we will code a new module  
for it and FOR\$IO\_BEG to see how much I/O initiation time  
improves. JBS 02-JUL-1979  
0000 76 :  
0000 77 :  
0000 78 : 1-008 - Do likewise for FOR\$READ\_DU and FOR\$WRITE\_DU. JBS 03-JUL-1979  
0000 79 : 1-009 - Remove all entry points except FOR\$WRITE\_BF; each of the  
0000 80 : others gets its own module so we can selectively load  
0000 81 : the necessary UDF and REC modules. JBS 09-JUL-1979  
0000 82 : 1-010 - Correct some typos in the references to UDF and REC  
0000 83 : levels. JBS 12-JUL-1979  
0000 84 : 1-011 - New parameter format for FOR\$IO\_BEG. SBL 5-Dec-1979  
0000 85 : 1-012 - Change BRW FOR\$IO\_BEG+2 to JMP G^FOR\$IO\_BEG+2. JAW 21-Feb-1981

```
0000 87 .SBttl DECLARATIONS
0000 88
0000 89
0000 90 : INCLUDE FILES:
0000 91 :
0000 92
0000 93 $FORPAR : Define inter-module FORTRAN symbols
0000 94 $ISBDEF ; Define statement type symbols
0000 95
0000 96 : EXTERNAL SYMBOLS:
0000 97 :
0000 98 :
0000 99
0000 100 .DSABL GBL ; Declare all external symbols
0000 101 .EXTRN FOR$SIO_BEG ; common I/O statement processing
0000 102 :+
0000 103 : The following references are to make sure the necessary UDF and REC
0000 104 : modules are loaded. These are the routines which are called through
0000 105 : the dispatch tables in FOR$SDISPAT.
0000 106 :-
0000 107 .EXTRN FOR$UDF_WF0, FOR$UDF_WF1, FOR$UDF_WF9
0000 108 .EXTRN FOR$REC_WD0, FOR$REC_WD1, FOR$REC_WD9
0000 109
0000 110 :
0000 111 : MACROS:
0000 112 :
0000 113 : NONE
0000 114 :
0000 115 : PSECT DECLARATIONS:
0000 116 :
0000 117
00000000 118 .PSECT _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 119
0000 120 :
0000 121 : EQUATED SYMBOLS:
0000 122 :
0000 123 :
0000 124 :
0000 125 :
0000 126 : OWN STORAGE:
0000 127 :
0000 128 : NONE
0000 129 :
```

0000 131 .SBTTL FOR\$WRITE\_DF - WRITE DIRECT formatted  
0000 132  
0000 133 :++  
0000 134 : FUNCTIONAL DESCRIPTION:  
0000 135  
0000 136 Initialize the FORTRAN I/O system to perform  
0000 137 a WRITE DIRECT formatted I/O statement.  
0000 138  
0000 139 : CALLING SEQUENCE:  
0000 140  
0000 141 CALL FOR\$WRITE\_DF (unit.rl.v, format.adr.mbu.ra  
0000 142 [, err.adr.j.r [, end.adr.j.r]])  
0000 143  
0000 144 : INPUT PARAMETERS:  
0000 145  
0000 146 unit.rl.v logical unit number  
0000 147 format.adr.mbu.ra adr. of compiled format byte array  
0000 148 [err.adr.j.r] optional ERR= address  
0000 149 [end.adr.j.r] optional END= address  
0000 150  
0000 151 : IMPLICIT INPUTS:  
0000 152  
0000 153 NONE except those used by FOR\$SIO\_BEG.  
0000 154  
0000 155 : OUTPUT PARAMETERS:  
0000 156  
0000 157 NONE  
0000 158  
0000 159 : IMPLICIT OUTPUTS:  
0000 160  
0000 161 NONE except those left by FOR\$SIO\_BEG.  
0000 162  
0000 163 : COMPLETION CODES:  
0000 164  
0000 165 NONE  
0000 166  
0000 167 : SIDE EFFECTS:  
0000 168  
0000 169 NONE except those of FOR\$SIO\_BEG.  
0000 170  
0000 171 :--  
0000 172  
0000 173 FOR\$WRITE\_DF:: .MASK FOR\$SIO\_BEG  
50 05 0000 0000 174 MOVZBL #ISBK ST TY WDF, R0 : Statement type  
00000002'GF 17 0002 175 JMP G^FOR\$SIO\_BEG+2 : branch past call mask  
0000B 176  
0000B 177  
0000B 178 .END

## **FORSWRITE DF Symbol table**

- entry point for FORTRAN WRITE DIRECT F 16-SEP-1984 00:03:28 VAX/VMS Macro V04-00 Page 5  
I 6  
6-SEP-1984 11:01:49 [FORRTL.SRC]FORWRITDF.MAR:1 (4)

FORSSIO BEG  
FORSSREC\_WD0  
FORSSREC\_WD1  
FORSSREC\_WD9  
FORSSUDF\_WF0  
FORSSUDF\_WF1  
FORSSUDF\_WF9  
FORSWRITE DF  
ISBSK ST TY\_WDF

★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
★ ★ ★ ★ ★ ★ ★ ★	X	00
000000000 RG 01		
00000005		

## ! Psect synopsis !

PSECT name  
-----  
. ABS .  
FORSCODE

Allocation	PSECT No.	Attributes												
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
00000000 ( 0.)	00 ( 0.)	NOPIC	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE		
00000008 ( 1.)	01 ( 1.)	PIC	USR	CON	REL	LCL	SHR	EXE	RD	NOWRT	NOVEC	LONG		

## ! Performance indicators !

Phase	Page faults
-----	-----
Initialization	32
Command processing	118
Pass 1	127
Symbol table sort	0
Pass 2	47
Symbol table output	3
Psect synopsis output	2
Cross-reference output	0
Assembler run totals	331

CPU Time	Elapsed Time
00:00:00.09	00:00:00.97
00:00:00.57	00:00:03.53
00:00:01.25	00:00:04.27
00:00:00.19	00:00:00.41
00:00:00.47	00:00:02.90
00:00:00.02	00:00:00.02
00:00:00.02	00:00:00.02
00:00:00.00	00:00:00.00
00:00:02.63	00:00:12.12

The working set limit was 1050 pages.

6684 bytes (14 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 187 non-local and 0 local symbols.

178 source lines were read in Pass 1, producing 8 object records in Pass 2.

9 pages of virtual memory were used to define 2 macros.

## ! Macro library statistics !

Macro library name

## Macros defined

- \$255\$DUA28:[FORRTL.OBJ]FORRTL.MLB;1  
- \$255\$DUA28:[SYSLIB]STARLET.MLB;2  
TOTALS (all libraries)

202

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:FORWRITDF/OBJ=OBJ\$:FORWRITDF MSRC\$:FORWRITDF/UPDATE=(ENHS:FORWRITDF)+LI

0185 AH-BT13A-SE  
VAX/VMS V4.0

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